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Sheet No. 1

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Sheet No. 2

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

T.C. Mendenhall
Superintendent.

State: *Alaska*.

DESCRIPTIVE REPORT.

Hyd S Sheet No 2080

LOCALITY:

Paxos Island Sounds

Roberts Point

1891
190

CHIEF OF PARTY:

L. J. N. Jordan, U.S.N.

Write me at: Olympia, Thurston Co., Wash.

Telegraph me at: " "

My Express Office is: " "

W⁸) Assistant in Charge
U. S. Coast and Geodetic Survey,

APB.

Hyde Sheet

No. 2080

Sch. Ernest

August 31, 1891



Dr. S. C. Mendenhall

Superintendent C. & G. Survey
Washington, D.C.

Sir:

In obedience to general circular issued July 3, 1890, I have the honor to submit the following Descriptive Report of

Projection No. 9, Gulf of Georgia.

This sheet is in the southern part of the Gulf of Georgia, and the hydrography is included in a rectangle, extending E. N. E. seven (7) miles and N. N. W. five and one half ($5\frac{1}{2}$) miles, from East Pt. Light on Saluma Id. B.C.; almost all of which is deep water from fifty (50) to one hundred and forty (140) fathoms. All the work done on this sheet was with the steam launch the boat work around East Pt., Yumb and Pitos Ids. being included on Sheet 10, Canal de Haro.

2

and that around Pt. Roberts on Projection No. 9, Boundary Bay. The only shore where the wave approached close to is the eastern end of Tumbs Id and the reef extending in a N.E. by direction from this end of the Island.

The eastern ends of Tumbs and Saturna Id's are of a sandstone and conglomerate rock formation, excepting between O's Harbor and Pan where there is a gravel soil. The bases of the rocky points are covered with light moss-grown soil that can be stripped off like a blanket, and a short distance back are the usual evergreens of this country.

The natural dividing line between the Gulf of Georgia and the Canal de Haro is from East Pt. to Patos Id., where the main channel turns at almost right angles to the west. Vessels bound to and from British Columbian and Alaskan Ports pass through these waters excepting those using Swanson Channel to the west of Pender Id.

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In coming from the sea through the Canal de Haro or President Channel East Pt., on Saturna Id., on the left, and Patos Id., on the

right, mark the entrance of the main channel into the Gulf; the former high, bare, and rocky at its eastern end, and increasing in height to nearly a thousand feet but a few miles to the west, the white tower and buildings of the Light showing out well on the high knoll a few hundred meters from the extreme end of the point; the latter is almost entirely covered with evergreens, not more than thirty or forty feet above high water, except near the extreme ends of the rocky points on which are the S's Palos, N.W. Palos or Dur, and Trident. So the N.E. Pt. Roberts shows as an island, and the Points on the mainland, Whithorn, Birch, and Kwo-mais can be seen across the Gulf, tree-covered, with the peaks of the Cascades and Selkirks beyond. Mt. Baker, unless covered with clouds, shows out white with snow and very prominent to the east. After passing East Pt. the East end of Thimble Id. is seen as two points with a bright between, and the Gulf of Georgia extending N.W. to the horizon. After coming into the Gulf the high, tree-covered chain

4

of islands to the E^E of Vancouver Id. are seen rising sharply from the Gulf. Coming up Rosario Straits, East Pt. and Turnbo Id. are shut out in turn by Malta, Lucia, and Patos Id's. till to the N^N of the latter, when East Pt shows against the Canal de Haro, and Turnbo Id is projected against, and hardly to be distinguished from, Saturna Id. Coming from the N^N the same remarks hold good in regard to Turnbo Id., whilst the islands to the E^E, though more distinct, are projected against the higher land on Orcas Id.

The lead is of little use on any part of this shore, as a vessel would ground before she could be run off if soundings were taken with a hand lead near East Pt., or Bailing Ruf, and on Turnbo Ruf the lead, unless very heavy, is liable to be swept off by the strong currents and give too much water or no bottom.

Vessels coming up the Canal de Haro can keep close along the S.E. side of East Pt. as far as the light, but should not turn to the N^N until they are ~~from~~ one and a half ($1\frac{1}{2}$)

to two (2) miles past it. By keeping Java Head open to the N.E. of East Pt. a clearance will be had of both Boiling and Tumbo Reefs. If coming up Rosario Straits there are no dangers after passing the Sucia Id's. and a straight course may be laid up the Gulf. Coming from the N.E., Tumbo Reef is a danger to be kept well clear of. By keeping the east end of the Sucia Id's open from the east end of Pator Id a good clearance will be made of this danger, keeping this range until Java Head is open to the S.E. of East Pt. before turning down the Canal de Hato, and standing to the E.E. to bring Clark Id open to the E.E. of the smaller Matia Id. to clear the ledge off the N. side of the Sucia Id's.

There is a buoy marking the eastern end of Tumbo Reef, but the strong currents often cause it to lie close down on its side, and the numerous tide reefs in this vicinity may keep it from view till close aboard.

The light on East Pt. shows well to the S.E. and all around to the E.E., to the N.E.,

and is only shut out to the N.W. when well inside the two points on Tumbo Id. on which are Nobs and Pan ob.

4

The main channel varies in depth from sixty (60) to one hundred and forty (140) fathoms, and by keeping clear of Tumbo Reef deep water is found all over this shut when work was done this year.

Bailing Reef off East Pt. is very circumscribed in extent and runs off but a short distance under low water mark.

Tumbo Reef is entirely under water and one of the worst reefs in or near these waters. It extends in a N.E. by direction from the East end of Tumbo Id. from a mile to a mile and a quarter, with numerous rocky patches with from six (6) to twenty-five (25) feet through. The tidal currents set across it with considerable velocity, and from the conformation of the land these currents may be running in an unanticipated direction. The buoy on the East end of this reef should now be passed

to the west by vessels drawing over six (6) feet
of water. Patos Id. may be passed close to
on its western end, so that vessels should
keep well to the east and give Simbs Ruf a
good clearance.

Dug water extends up between Boiling
and Simbs Refs, and vessels may round
the former a third of a mile distant and
stand up into the Simbs Channel. Care
should be taken not to be swept over on
either Ruf. A stranger should not attempt
this passage without a pilot, there are no
good ranges and the tidal currents strong.

There are no pilots in this vicinity;
vessels sailing in these waters obtain their
pilots in the ports to the N^E or S^E. Pilot
fees are compulsory in both British Columbia
and the State of Washington, but the law
is not enforced in the latter state.

Tug-boats are found in the ports
to the N^E and S^E, and at the entrance
of the straits of Fuca near Cape Flattery.

The slight changes noticed on this survey are probably due to a little closer development than to any natural causes, and none were noticed that would affect navigation.

The bottom is soft blue or green mud except near or on Tumbo Reef where it is rocky or sand and gravel.

The tidal currents on this sheet are the strongest I have met with on the sounds or round these waters. Their general direction on the N.E. three quarters of the sheet is up and down the Gulf of Georgia, but in the S.W. compass, around the reefs, and as far east as Patos Id. there are whirls, tide-rips, and eddys, that will turn a small craft almost end for end, and are dangerous to small open boats. The flood currents from the Canal de Haro and President Channel meet the big eddys N. of East Pt. and Tumbo Ids., and boil and whirl over the reefs like a cataract,

and meeting that from Rosario Strait farther to the E^E causes many tide-rips that might cause a stranger to believe himself on or near the Reef. On the ebb the currents flow down the Gulf of Georgia and Tumbs channel, meeting the currents from the Gulf into the Canal de Hars and the eddy current south of East Pt. causing similar whirls to those of the flood. Close along the S.E. side of East Pt. the current always sets to the N.E. and only decreases in velocity a short time on the turn of the tide. On the Reefs the currents turned and ran in an opposite direction in less than five minutes. Small boats should not venture out in the waters of this sheet, for if not swamped by the numerous tide-rips and whirls, they will be liable to meet the short, sharp, sea that rises very quickly if a barge springs up against the current.

Current observations were made during the the spring tides in June, when the strongest currents might be expected, and showed a maximum velocity of three and four knots (3.4) knots per hour; these observations were taken by weighting a pole, setting it adrift, and following

it with the steam launch. The velocity would be affected by local surface whirls and eddys, but probably not more than half a knot, as the steam launch used by this Party worked in these waters at all stages of the tide, and was always able to make some headway; the maximum speed of the launch was six (6) knots.

7

No changes were found other than might be due to a slightly better development than the former surveys.

8 and 9

See report accompanying Projection No. 7, Gulf of Georgia. There are no anchorages on the sheet.

10

The ship "John Romfield" of Bath, Me., coal hulk, drawing twenty-eight (28) feet, bound from Nanaimo, B.C., to San Francisco, Cal., in February, 1886, was being towed to sea by the tug "Tacoma" of Tacoma, Wash., grounded on Humbo Reef, and her hull was an entire loss. The tug kept too close in and the current

swept the ship on the rocks. There was no buoy on the reef or light on East Pt. at that time, but the night was clear, the sea smooth, and land visible on both sides. The Courts gave the ship-owners damages to the full value of the tug, all the law allowed. The ship was stripped of her sails and rigging before the crew left her, the rocks went through her bottom so as make the deck around her after hatch bulge up, when she settled down at low water. The hull and cargo were sold at auction, and being favored with smooth weather most of her cargo was saved, the hull howevered to pieces a few months after, and no vestige is left of her at present.

There are no life saving stations on or near this sheet.

The nearest hospital for diarrhea is at Port Townsend.

11 and 12

See report accompanying Projection No. 7, Gulf of Georgia.

Fresh water can not be obtained near

12

In the southern part of this sheet, see report accompanying Projection No. 9. Boundary Bay, for Rev. Roberts.

Coal has been found on Tumbs Id. and a Company organized to develop it; a shaft has been sunk about three hundred (300) yards from the shore line between O's Nabs and Pan. to date no coal has been shipped as yet.

13

There are no wharves on Tumbs Id. or East Pt., but the foreman at work on the coal mine on Tumbs Id. said it was the intention of the Company to build one soon, the location of which had not yet been determined upon.

14, 15 and 16

In report accompanying Projection No. 7, Gulf of Georgia.

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There are no passenger steamers touching at any point on this sheet. Steamers to and from Alaska, using the inside route, and steamers to and from Vancouver, B.C.

and Japan, pass through these waters.

There are no Post offices or Telegraph lines on this shore. The nearest Post office is on Baldwin Id. The nearest Telegraph Office at Blaine on Drayton Harbor.

In reports accompanying Projection No. 7, Gulf of Georgia.

There are no towns on this shore. A few scattered ranches, the Light House keepers at East Pt., and the men working on the coal mine on Gumbo Id. are the only people on the dangerous end of this shore. The Light House tenders, and sail boats are their only means of communication with outside places.

There are patches of reefs growing on the shoaler portions of Gumbo Reef and around Boiling Reef, but the strong tidal currents usually sweep it under water, and it should not be relied upon to indicate the dangers it may cover.

if seen, it should be kept well clear of.



Very respectfully

J. W. Jordan, Lieut. com.

Comdg. "Earnest".

Forwarded

S. M. Ackley Lt Com'd'r, U. S. N.,
Hydrographic Inspector C. & G. Survey.

Hydrographic Sheet 2080

This sheet embraces the Gulf of Georgia north of Patos Island, Washington, by J. N. Jordan, U. S. N., in 1891.

Tides were observed at Sucia Island, in 1891, and the soundings were reduced to the mean of a few selected lowest low waters. To reduce the soundings to the plane of mean lower low water, add 2.0 feet.

L. P. Shidy,
January 21, 1927.